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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PATEL, TULSIDAS C

ART UNIT PAPER NUMBER

2839

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,226

Applicant(s)

PAYER ET AL.

Examiner

T. C. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 27-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

General Status

1. This is a **Final Action** on the Merits. Claims 1-26 are pending in the case. Non-elected claims 27-34 have been withdrawn in paper number 7.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear if "lens" recited in claim 1 is the same as "lens substrate" recited in claim

5. Similar recitation is also present in claim 18.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under

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35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1, 2 and 5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dautartas et al. (US 5,841,544).

Dautartas et al. in figure 1, discloses a micro-optical component comprising an optical element including a lens 32, for interacting with an optical beam and a mounting structure 12 for attaching the optical element to an optical bench, wherein the optical element is attached to the mounting structure by solid-phase welding or thermo-compression bonding (column 2, lines 58-59. For claim 6, the optical lens is also a microelectromechanical device.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 4, 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dautartas et al. in view of Synder (US 5,888,841)

The Dautartas et al. satisfies the limitations of claims 1, 2, and 5. Dautartas et al. in column 2, lines 43-44, discloses substrate made of silicon or of any suitable material.

However, Dautartas et al. does not disclose coating required for thermocompression bonding and also other bonding methods recited in claims 3 and 4. Synder, in figure 3 and 4, discloses

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bonding of an optical component to a substrate 120 and also in column 7, lines 45-50, discloses various method by which the optical components can be bonded to a substrate. In addition Synder, in column 6, lines 47-48, disclose use of gold in coating the substrate for bonding purpose. Therefore, it would have been obvious to one of ordinary skill in the art to use any suitable method for bonding as taught by Synder and use substrate of metal or any other suitable material, as suggested by Dautartas et al. for purpose of supporting the optical element.

For claims 14-18, Dautartas et al. also discloses an optical bench 70. However, Dautartas does not disclose the mounting structure being soldered to the bench. Bonding of two components by soldering is well known in the art, hence, it would have been obvious to one of ordinary skill in the art to solder the mounting structure to the bench so that the mounting structure and bench are rigidly connected.

8. Claims 6 and 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop et al. (US 5,815,616) in view of Dautartas et al. and Synder.

Bishop et al. in figure 1, discloses a MEMS or Fabry-Perot filter device connected to a substrate or mounting structure and coupled to an optical fiber. However, Bishop et al. does not disclose use of thermocompression bonding of the device to the mounting structure.

Dautartas et al. discloses an optical element attached to a mounting structure by solid-phase welding or thermo-compression bonding (column 2, lines 58-59) and Synder discloses bonding of an optical component to a substrate 120 and also in column 7, lines 45-50, discloses various method by which the optical components can be bonded to a substrate. In addition Synder, in column 6, lines 47-48, discloses use of gold in coating the substrate for bonding purpose.

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Therefore, it would have been obvious to one of ordinary skill in the art to modify the device of Bishop et al. and to use any suitable method for bonding as taught by Synder and use substrate of metal or any other suitable material, as suggested by Dautartas et al. for purpose of supporting the optical element.

Dautartas et al. also discloses an optical bench 70. However, Dautartas does not disclose the mounting structure being soldered to the bench. Bonding of two components by soldering is well known in the art, hence, it would have been obvious to one of ordinary skill in the art to use solder the mounting structure to the bench for the device of Bishop et al. so that the mounting structure and bench are rigidly connected.

Response to Arguments

9. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. C. Patel whose telephone number is (703) 308-1736. The examiner can normally be reached on 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (703) 308-2710. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1736.



T. C. Patel
Primary Examiner
Art Unit 2839

tcp
March 23, 2003